

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.: MÜCKE

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| In re Application of: |) |
| GERT MÜCKE et al. |) |
| Int. Appl. No.: PCT/EP2005/002648 |) |
| Int. Filing Date: March 11, 2005 |) |
| For: METHOD AND DEVICE FOR REMOVING LIQUIDS FROM THE SURFACE OF A STRIP |) |

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S I R:

In accordance with 37 C.F.R. 1.56, applicant wishes to call the attention of the Examiner to the references listed on enclosed form PTO-1449 which were cited in the instant specification and in the International Search Report issued by the European Patent Office with regard to the corresponding International patent application No. PCT/EP2005/002648, respectively. Applicant does not admit that any of the cited documents constitutes prior art against the pending application.

Copies of these references are submitted herewith along with form PTO-1449. The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

- ☐ This Information Disclosure Statement is filed within three months of the filing date of a national application other than a continued prosecution application under 1.53(d), so that no fee under 37 C.F.R. §1.97 is due.
- ☒ This Information Disclosure Statement is filed within three months of the date of entry of the national stage as set forth in 1.491 in an international application, so that no fee under 37 C.F.R. §1.97 is due.
- ☐ This Information Disclosure Statement is filed before the mailing of a first Office Action on the merits, so that no fee under 37 C.F.R. §1.97 is due.
- ☐ This Information Disclosure Statement is filed before the mailing of a first Office Action after the filing of a request for continued examination under §1.114, so that no fee under 37 C.F.R. §1.97 is due.
- ☐ This Information Disclosure Statement is filed after the issuance of a first office but before issuance of a final action under §1.113, or a notice of allowance under §1.311.
- ☐ This Information Disclosure Statement is submitted after the mailing of a final action or a notice of allowance, but before payment of the issue fee.
- ☐ The undersigned submits the following statement requesting consideration of this statement:
The undersigned hereby states:
 - ☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement;
 - ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the statement

after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the information disclosure statement.

- ☐ The fee of \$180.00 set forth in 1.17(p).
- ☐ The Commissioner is hereby authorized to charge the fee as set forth in 1.17(p), and any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.
- ☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

In order to satisfy the requirement under 37 C.F.R. §1.98(a)(3) for a concise explanation of the relevance of each item of information, applicant herewith submits a copy of the International Search Report. In addition, applicant notes with respect to any information that is not in English language as follows:

German Patent No. DE 195 19 544 describes an apparatus for removing liquid from the surface (O', O'') of a strip (B) transported by a strip processing machine by means of a gas jet (G). The apparatus is provided with a gas delivery nozzle (2, 4, 5) and a suction opening (8a) for removal of the resultant gas and liquid mixture. The gas jet (G) is directed in a flow over the strip towards at least one of the strip edges. The strip edge targeted by the gas flow is provided with a suction opening (8a).

German Offenlegungsschrift DE 199 23 949 A1 describes a sensor (9) having a suction pad, which is arranged parallel with the surface of the metal band (1), and a blowing device, to inject air (2,3) between the metal band and the suction pad (4). The blowing device is formed to inject the air, so that an aerodynamic paradox is created between the metal band and the suction pad. The suction pad has at least one air outlet opening (13) to inject the air between the metal band and the suction pad. The suction pad has an electrical resistance on the side facing the metal band. The sensor is formed to measure the temperature of the position of the metal band that air injected through the air outlet meets.

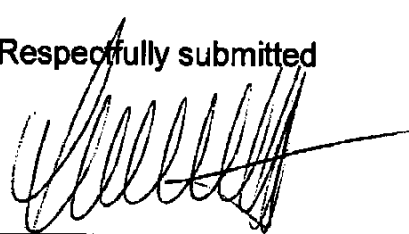
European Patent No. EP 0 513 632 B1 describes a device for removing liquid from the surface of a moving strip (B) by means of a gas, such as air, blown on to the moving strip (B). Disposed transversely of the direction (L) in which the strip runs is a slot nozzle (3) which is directed at the strip surface at an angle β of 45° to 90° of its jet oppositely to the direction (L) in which the strip runs. The ratio between the distance (h) of the slot nozzle (3) from the moving strip (B) and the width (s) of the slot is in the range $h/s=2$ to $h/s=10$, so that the velocity of emergence of the gas jet blown by the slot nozzle (3) on to the strip (B) is in the range of $0.3 < \text{Mach} < 2$, and a suctional removal gap (4) is disposed above the strip (B) at a distance of 5 to 25 nozzle distances (h) in the direction (L) in which the strip (B) runs upstream of the line of impingement of the gas jet emerging from the slot nozzle (3).

The above-identified application discloses and claims an invention patentable over this prior art.

Entry of the references above set forth into the file of the above application is believed to be in order and is respectfully requested.

Respectfully submitted

By:


Henry M. Feiereisen
Agent for Applicant
Reg. No. 31,084

Date: October 3, 2006
350 Fifth Avenue, Suite 4714
New York, N.Y. 10118
(212) 244-5500
HMF:af

Form PTO-1449U.S. Department of Commerce
Patent and Trademark Office**INFORMATION DISCLOSURE CITATION****Attorney's Docket No.****MÜCKE****Applicant****GERT MÜCKE et al.****Int. Appl. No.****PCT/EP2005/002648****Int. Filing Date****March 11, 2005****Group****Examiner****U.S. PATENT DOCUMENTS**

| Examiner Initial | Document Number | Date | Name | Class | Subclass | Filing Date, if appropriate |
|------------------|-----------------|------------|----------------|-------|----------|-----------------------------|
| | 3,572,352 | 03-23-1971 | D.C.A. Koopman | | | |
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FOREIGN PATENT DOCUMENTS

| | Document Number | Date | Country | Class | Subclass | Translation |
|--|------------------|------------|---------|-------|----------|-------------|
| | DE 39 09 016 A1 | 09-20-1990 | Germany | | | no |
| | DE 40 09 721 A1 | 10-02-1991 | Germany | | | no |
| | WO 03/008123 | 01-30-2003 | PCT | | | abstract |
| | DE 195 19 544 C | 11-28-1996 | Germany | | | no |
| | EP 0 513 632 B1 | 07-19-1995 | Europe | | | claims |
| | DE 199 23 949 A1 | 02-17-2000 | Germany | | | no |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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Examiner:**Date considered:**

*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2005/002648

| | | |
|---|--|--|
| A. CLASSIFICATION OF SUBJECT MATTER | | |
| IPC 7 | B08B5/00 | B08B3/04 B08B7/02 B21B45/02 |
| According to International Patent Classification (IPC) or to both national classification and IPC | | |
| B. FIELDS SEARCHED | | |
| Minimum documentation searched (classification system followed by classification symbols) | | |
| IPC 7 B08B B21B | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | |
| Electronic data base consulted during the International search (name of data base and, where practical, search terms used) | | |
| EP0-Internal | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | DE 39 09 016 A1 (WIELAND-WERKE AG, 7900 ULM, DE) 20 September 1990 (1990-09-20) column 1, line 26 - column 2, line 2; figures 1,2 | 1-6,8-13 |
| X | DE 40 09 721 A1 (MEISSNER, WERNER, 5277 MARIENHEIDE, DE) 2 October 1991 (1991-10-02) column 1, line 1 - line 14 column 4, line 29 - column 5, line 19 | 1-6,8-13 |
| X | US 3 572 352 A (DIRK C.A. KOOPMAN) 23 March 1971 (1971-03-23) column 1, line 25 - line 35 column 1, line 61 - column 2, line 40 ----- -/- | 1-6,8-13 |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. | | |
| * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "S" document member of the same patent family | | |
| Date of the actual completion of the international search | | Date of mailing of the international search report |
| 5 July 2005 | | 12/07/2005 |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | | Authorized officer Militzer, E |

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2005/002648

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | <p>WO 03/008123 A (DOEHRER, KLAUS) 30 January 2003 (2003-01-30) page 1, line 13 - line 22 page 3, line 8 - line 15 -----</p> | 1-6,8-13 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2005/002648

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|----------------------------|---------------------|
| DE 3909016 | A1 | 20-09-1990 | NONE | |
| DE 4009721 | A1 | 02-10-1991 | NONE | |
| US 3572352 | A | 23-03-1971 | NONE | |
| WO 03008123 | A | 30-01-2003 | WO 03008123 A1 | 30-01-2003 |